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10/706,031

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Daniel Suraqui

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06/27/2006

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EXAMINER

SHAPIRO, LEONID

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/706,031	<b>Applicant(s)</b> SURAQUI, DANIEL	
	<b>Examiner</b> Leonid Shapiro	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-20, 22-32 and 36 is/are rejected.
- 7) ☒ Claim(s) 9-11, 21 and 33-35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6-4-06</u> | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 36 is rejected under 35 U.S.C. 102(e) as being anticipated by Wood et al. (US Patent No. 6,810,271 B1).

Wood et al. teaches a hardware keyboard for use with an electronic device (See Col. 1, Lines 6-8) comprising three concentric circles (See Fig. 4, items 56,68,70,72,74, from Col. 3, Line 52 to Col. 4, Line 4) wherein at least one of the keys of said keyboard comprises two characters (See Fig. 2, items 2,a,b,c, Col. 3, Lines 1-4) , said keyboard further comprising means for generating a bi-dimensional input pattern for a word inputted using keystrokes and for recognizing the inputted word based on said bi-dimensional input pattern (See Col. 3, Lines 9-17).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2629

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,5-6,13-15,20,22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niemeier (US Patent No. 5,574,482) in view of Ilan et al. (US Patent No. 6,298,146 B1).

As to claim 1, Niemeier teaches a reduced keyboard system for text input on an electronic device, comprising;

(a) a virtual keyboard comprising a plurality of keys (See Fig. 4, items 60,70, Col.1, Lines 9-12);

(b) an input device associated with said virtual keyboard, wherein text input is performed by placing said input device onto the virtual key of said virtual keyboard that corresponds to the first character of a word, sliding said input device to subsequent virtual keys corresponding to subsequent characters of a word, and lifting said input device from said virtual keyboard so as to produce a bi-dimensional input pattern (See Fig. 4, items 50,60,70, from Col. 4, Line 65 to Col. 5, Line6).

Niemeier does not disclose a dictionary database associated with said virtual keyboard, said dictionary database comprising a plurality of classes wherein each of said classes contain words that have first and last letters corresponding to predetermined keys of said virtual keyboard; wherein said bi-dimensional input pattern is used in order to determine the identity of the inputted word at least partially based on comparison between said bi-dimensional input pattern and patterns generated from words contained within the class of said dictionary database to which the inputted word belongs.

Ilan et al. teaches a dictionary database associated with touch pad, said dictionary database (in the reference is equivalent to instruction library) (See Fig. 2, item 58, Col. 3, Lines 58-60); wherein said bi-dimensional input pattern is used in order to determine the identity of the inputted word (instruction) at least partially based on comparison between said bi-dimensional input pattern and patterns generated from words (instructions) contained within the class of said dictionary database to which the inputted word belongs (See Fig. 2, item 50,52,56,58, Col. 1, Lines 43-60).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate Ilan et al. teaching into Niemeier system in order to identify input (See Col. 1, Lines 11-13 in the Ilan et al. reference).

As to claims 5-6, it generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent of showing criticality of in a particular recited value. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to interchange number of keys. Such a limitation would have been considered as obvious variation on the matter of selected refractive index which fails patentably distinguish over the prior art of Bowman et al. and Yates et al. and Jones. In re Rose, 105 USPQ 237 (CCPA 1955).

As to claim 20, Niemeier teaches a method for text input on an electronic device, using a reduced virtual keyboard associated with electronic device, comprising;

(a) placing an input device onto the virtual key of a reduced virtual keyboard that corresponds to the first character of a word, sliding said input device to subsequent virtual keys corresponding to subsequent characters of a word, and lifting said input

device from said virtual keyboard so as to produce a bi-dimensional input pattern (See Fig. 4, items 50,60,70, from Col. 4, Line 65 to Col. 5, Line6).

Niemeier does not disclose providing a dictionary database associated with said virtual keyboard, said dictionary database comprising a plurality of classes wherein each of said classes contain words that have first and last letters corresponding to predetermined keys of said virtual keyboard; comparing between said bi-dimensional input pattern and patterns generated from words contained within the class of said dictionary database to which the inputted word belongs; identifying at least one solution for the inputted word based on the compasion.

Ilan et al. teaches a dictionary database associated with touch pad, said dictionary database (in the reference is equivalent to instruction library) (See Fig. 2, item 58, Col. 3, Lines 58-60); wherein said bi-dimensional input pattern is used in order to determine the identity of the inputted word (instruction) at least partially based on comparison between said bi-dimensional input pattern and patterns generated from words (instructions) contained within the class of said dictionary database to which the inputted word belongs (See Fig. 2, item 50,52,56,58, Col. 1, Lines 43-60).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate Ilan et al. teaching into Niemeier system in order to identify input (See Col. 1, Lines 11-13 in the Ilan et al. reference).

As to claims 13-14, 22-23, Ilan et al. teaches segmenting the bi-dimensional input pattern into monotonous segments and applying a line simplification algorithm to bi-dimensional input pattern (See Fig. 3A, item letter "C", Col. 4, Lines 14-17).

As to claims 15,24 Ilan et al. teaches computing the matching distance between the bi-dimensional input pattern and patterns generated from a plurality of words to the dictionary database class to which the inputted word belongs (See col. 1, Lines 56-60).

3. Claims 2-3, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ilan et al. and Niemeier as applied to claims 1,20 above, and further in view of Zilberman (US Patent No. 5,156,475).

As to claims 2,28 Ilan et al. and Niemeier do not disclose the keyboard with QWERTY arrangement.

Zilberman teaches the keyboard with QWERTY arrangement (See Col. 1, Lines 18-27).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate Zilberman teachings into Ilan et al. and Niemeier system in order increase the range of applications of the input devices.

As to claims 3,29, Zilberman teaches the keyboard with a concave curvature (See Fig. 2, Col. 3, Lines 52-56).

4. Claims 4, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ilan et al. and Niemeier as applied to claims 2,28 above, and further in view of Einbinder (US Patent No. 3,945,382).

Ilan et al. and Niemeier, Zilberman do not disclose the keyboard with convex curvature.

Einbinder teaches the keyboard with convex curvature (See Col. 6, Lines 52-53).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate Einbinder teachings into Ilan et al. and Niemeier, Zilberman system in order increase the range of applications of the input devices.

5. Claims 7-8,19, 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ilan et al. and Niemeier as applied to claims 2,28 above, and further in view of Wood et al.

As to claims 7-8, 31-32 Ilan et al. and Niemeier do not disclose the keyboard with at least one of keys contains at least two characters and plurality of concentric circles.

Wood et al. teaches the keyboard with the keyboard with at least one of keys contains at least two characters (See Fig. 2, item16) and plurality of concentric circles (See Fig. 4, items 56,74).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate Wood et al. teachings into Ilan et al. and Niemeier system in order to enable to insert keys rapidly (See Col. 1, Lines 17-19 in the Wood et al. reference).

As to claim 19, Wood et al. teaches allowing the user to use the keyboard as a conventional keystroke keyboard (See Figs. 2-4), wherein at least one key of said keyboard comprise two characters (See Fig. 2, item "abc") and wherein a bi-dimensional input pattern is generated from the keys which are keystroked during the



input of a word for enabling word recognition and disambiguation (See Col. 3, Lines 1-17).

6. Claims 16-18, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ilan et al. and Niemeier as applied to claims 2,28 above, and further in view of Levy (Pub. No.: US 2003/0165801 A1).

As to claims 16-17, 25-26 Ilan et al. and Niemeier do not disclose determining possible intermediate letter candidates of the inputted word that allows for input errors.

Levy teaches determining possible intermediate letter candidates of the inputted word that allows for input errors (See Fig. 1, paragraphs 0022-0025).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate Levy teachings into Ilan et al. and Niemeier system in order to interpreting keypad input (See paragraph 0004 in the Levy reference).

As to claim 18, Levy teaches keyboard as a conventional keystroke keyboard (See Fig. 1, item 10, paragraph 0021).

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ilan et al. and Niemeier as applied to claim 20 above, and further in view of Hayashi et al. (Pub. No.: US 2003/00096735801 A1).

Ilan et al. and Niemeier do not disclose applying geometrical filters to bi-dimensional input pattern.

Hayashi et al. teaches applying geometrical filters (See paragraph 0096).

It would have been obvious to one ordinary skill in the art at the time of the invention to incorporate Hayashi et al. teachings into Ilan et al. and Niemeier system in order to use image data efficiently (See paragraph 0007 in the Hayashi et al. reference).

***Allowable Subject Matter***

8. Claim 9-12,21,33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 9, 33 the major difference between the teaching of the prior art of record (Wood et al., Niemeier and Ilan et al.) and the instant invention is the concentric circles comprise an outer circle having 8 keys, a middle circle having 4 keys, and an inner circle having one key.

Claims 10,34 depend on claims 9,33.

Relative to claims 11,35 the major difference between the teaching of the prior art of record (Wood et al., Niemeier and Ilan et al.) and the instant invention is the keyboard comprises 16 keys, and wherein the concentric circles comprise an outer circle having 10 keys, a middle circle having 5 keys, and an inner circle having one key.

Relative to claims 12,21 the major difference between the teaching of the prior art of record (Wood et al., Niemeier and Ilan et al.) and the instant invention is that the words belonging to a specific class of said dictionary database are ordered according to curvilinear length.

***Telephone Inquire***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS  
06.22.06



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